

## CAUSES FOR AMENORRHOEA ACCORDING TO PERSONAL OBSERVATIONS

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In the examination and treatment of amenorrhoea seriee of errors are allowed in the everyday practice which sometimes complicate the condition rather than eradicate it. In order to create an idea about the causes for amenorrhoea in our environmental conditions we investigated 108 lying-in and out-patients. Of these 13 were with primary and 95 — with secondary amenorrhoea. Secondary amenorrhoea lasted as follows: 7 women had amenorrhoea for 2 months; 21 for 3 months; 19 — from 4 to 6 months, 16 — from 7 to 12 months; 26 — from 1 to 3 years, and 6 women had amenorrhoea dating back to more than 3 years.

According to age the patients were divided as follows: up to 20 years — 8; from 21 to 25 years — 35; from 26 to 30 years — 37; from 31 to 35 years — 21, and from 36 to 40 years — 7 women. The first menstruation of women with secondary amenorrhoea occurred from 11 to 15 years in 78 women, and in 17 — from 16 to 21 years. According to E. I. Kvater wartime amenorrhoea is more usually found in women whose first menstruation has appeared later.

Oligo- and opsomenorrhoea was found in 20 women, menorrhagia — in 11. In 52 women periods of amenorrhoea of varying duration has been recorded in the past. This indicates that amenorrhoea is usually preceded by other illnesses and the majority of cases do not occur suddenly and definitely. As far as preceding disorders are concerned 43 have suffered from infectious diseases, 25 — from pleurisy, 6 — from pulmonary tuberculosis, and 2 from intrathoracic adenopathy.

Only 27 of the patients have had 1 or 2 births, and 10 of them have had abortions. From the latter 3 have suffered from severe complications. Among the patients 13 have had only abortions and 5 of them have suffered severe complications.

Gynaecologic examination reveals normal size of the uterus in 47 women; hypoplasia of the uterus I degree — in 33 women; II degree uterine hypoplasia in 20 women and III degree hypoplasia — in 8 women. Thus hypoplasia of II and III degree was found in about 25%.

Palpation of the internal sexual organs revealed inflammatory changes in 17 patients and in 4 cystic ovaria were detected. Additional paraclinical investigations were performed by means of common methods which are easily accessible in every gynaecological department.

The basal temperature was measured in 61 women. In 16 women it appeared biphasic and in 42 — monophasic, while in 3 it assumed a non-typical character. In this respect our data coincide with those of M. M. Kruglova and Z. I. Krasnovskaya,

By means of cytological examination of vaginal smears a good view can be obtained concerning ovarian hormones. In 57 women the hormonal profile has been examined. The preparations were stained after the method of Daniel Muster. Vaginal smears are classified into 4 basic groups: (1) eutrophic type (11 women), with changes which are typical for women with a normal menstruation; (2) hypotrophic type — with two subgroups — cyclical and acyclical. In women of the cyclical type (4) an alternative influence is recorded of the folliculin with progesterone effect on vaginal smears, but the acidophylic and pycnotic indices exhibit lower values, as compared with those in normal menstruation. The decrease in these indices is particularly marked in the middle of the cycle. Moreover, the second phase is usually more continuous.

Acyclic type (30 women) — the vaginal smears do not indicate any cyclicity, the acidophile index reaches 20—25%, whereas the pycnotic index — 30—40% with no progesterone influence being recorded. The indices may reach almost 0%.

(3) The Atrophic type (5 women) is characterized by the presence of superficial eosinophiles. Only few basophile cells are found. The intermediary cells predominate in the preparation with the appearance of cells from the deeper layers.

(4) Hypertrophic type (7 women) — a gradual increase of eosinophiles dominates in the vaginal smears. The pycnotic index is always high.

Our data indicate that in amenorrhoea the hypotrophic acyclic type of vaginal smears is the most commonly encountered (52%), followed by the eutrophic and the hypertrophic types.

Data from the investigation of 50 women reveal that eutrophic vaginal smears are most commonly associated with normal size of the uterus and are combined with a biphasic temperature. The same is true of the hypotrophic, cyclic vaginal smears. The acyclic hypotrophic smears are usually encountered in hypoplasia of the uterus and are almost always combined with monophasic temperature. Atrophic vaginal smears are identical with the foregoing. Hypertrophic smears are observed in uterus with a normal size and are usually combined with monophasic temperature.

To examine the endometrium we made use of the probatory band type curettage. Biopsy was performed only once. The examination of 55 women reveals that atrophy of uterine mucous membrane is the most common finding (in 17 women), followed by tuberculosis of the endometrium (in 13 women) and endometritis (in 7 women). Having in mind that the high percentage of atrophy of the mucous membrane actually represents completely cured cases of tuberculous endometritis, it becomes evident that the tuberculous infection in our environmental conditions is of primary significance in the etiology of amenorrhoea.

In 29 patients the basal metabolism was also examined, and in 16 it varied between  $-15$  and  $+15$ . In 10 basal metabolism exceeded 16 and in 3 it was more than  $+16$ . Although the number of examined women is small, the results reveal that in about 45% of the examined, the basal metabolism is disturbed. This should be kept in mind when treatment of amenorrhoea is carried out.

Comparing the data of basal temperature and vaginal smears in the cases with established atrophy of the endometrium and tuberculosis of the endometrium, it becomes evident that in 16 of the patients the temperature is monophasic, in 7 — biphasic and in one the temperature curve is atypical. These data are indicative that biphasic temperature is more common than monophasic in tuberculosis and atrophy of the endometrium, as compared with the total relation of both types of temperature in amenorrhoea cases. On the other hand, cases with monophasic temperature are numerous. This indicates that either disorders of the endometrium occur more easily in hypoplastic genitalia, or that the injured endometrium and the cause for this injury have involved also the ovarium, which in turn has resulted in its hypofunction. In this case maybe the lack of endometrium is of importance. According to M. A. Tsurulnikov (1960) in hysterectomy with preserving of ovaria, climacteric disorders are often available. If part of the endometrium is preserved, or if the latter is transplanted to the cervical canal or the ovarium, the climacteric disorders occur later.

We found uterine and ovarian disorders in 31 women. In this group we placed also the cases in which a varying degree of uterine hypoplasia was established, combined with ovarian hormonal insufficiency and in some cases also with certain changes in the mucous membranes of the uterus. In 28 of the patients the cause was of ovarian origin, in 15 hypofunction was present and in 13 — hyperfunction (hyperfolliculinemia). This means that in 59 patients the disorders in ovarian function gave rise to amenorrhoea. Our data approximate these of E. I. Gurevich (cited after Krimskaya) according to which 76.11% of the amenorrhoea cases are of ovarian origin. In 30 of the patients the cause lies in the endometrium, the majority being those suffering from tuberculosis or atrophy of the endometrium. In 10 of the patients the cause of amenorrhoea is related to curettage after birth or abortion. In 9 patients the cause remained obscure.

On the basis of the aforementioned studies the following conclusions may be drawn:

1. Elucidation of the causes for amenorrhoea requires a detailed clinical and paraclinical examination.
2. The patients often give anamnestic data for various types of menstruation disorders. Genital hypoplasia predisposes to amenorrhoea.
3. Tuberculosis is a comparatively common cause for amenorrhoea.
4. Examination of the basal temperature, curettage and vaginal smears are easily applicable, convenient for everyday practice, and reliable methods.
5. The commonest cause is the uterine and ovarian insufficiency followed by disorders of the endometrium and hyperfunction of the ovarium.

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## ПРИЧИНЫ АМЕНОРРЕИ ПО СОБСТВЕННЫМ НАБЛЮДЕНИЯМ

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### РЕЗЮМЕ

Авторы исследовали 108 женщин с аменореей и установили следующие причины: 31 — маточно-яичниковые, 28 — яичниковые (15 с гипофункцией и 13 с гиперфункцией), 30 — воспалительные и др. заболевания эндометриума 10 — после соскоба и 9 — неизвестные.